Horizon 474—A New Winter Oat Cultivar for Both Grain and Forage

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Horizon 474 is a winter oat cultivar that was codeveloped by the University of Florida (UF) and the Georgia Agricultural Experiment Station (UGA). Horizon 474 is a white-seeded oat that matures early. It has excellent test weight and good crown rust resistance. The new oat was selected from material donated by the Northrup-King Seed Company to the USDA-ARS, and it was released in 2002. Horizon 474 has considerable potential for both grain and forage production in the southeastern United States.

Horizon 474 was derived from a bulk population, which originated from the cross of Coker 84-15/TX84Ab2131. Coker 84-15 is an unreleased, advanced line that was tested in the 1985 Uniform Winter Oat Nursery. The TX84Ab2131 is a Texas breeding line that combined the crown rust resistance genes from TAM O-301, TAM O-312, Coker 227, and Coker 234 with the stem rust resistance gene from Alpha (CI9221). This is the same source of stem rust resistance present in Steele, TAMO 386, and TAMO 397.

As with most eastern oat varieties, Horizon 474 is susceptible to barley yellow dwarf virus (BYDV). Since it is aphid vectored, delaying planting until cooler weather tends to alleviate the spread of the virus. When planted early fall for forage, Horizon 474 is considered to be very disease resistant, although BYDV infection may result in some stunting and leaf discoloration.

**Grain Production**

Horizon 474 has higher grain yield, higher test weight, stronger straw, better crown rust resistance, and appears to be more winter hardy than Florida 501, a very popular, older cultivar. The three-year average oat grain yield for Horizon 474 was 120 bu./ac. in Georgia. Horizon 474 has similar maturity to Florida 501, and it matures 7–10 days earlier than Horizon 314, a popular variety released several years ago.

**Forage Production**

Horizon 474 has been a reliable forage producer and has been recommended for grazing and hay production. This oat also fits well in dairy silage operations where high-quality, cool-season forages are used for green chop or silage. The three-year seasonal forage yield for Horizon 474 was 7645 lb./ac. in Georgia, and the two-year yield averaged 4941 lb./ac. in northern Florida under dryland conditions.

Horizon 474 was released exclusively to Plantation Seeds, Inc. in Newton, GA.

Horizon 474 oat is considered to be an excellent choice for grain, hay, grazing, or ensiling in the southeastern United States.